

Introduction

The Transportation element of the Comprehensive Plan describes a system to accommodate local and regional demands through the Year 2020. It is coordinated with the Land Use and Utilities Elements. Projections for future traffic levels are based on projected demographics for the next 20 years, and not the maximum allowable intensities of use shown on the Future Land Use Plan.

The transportation element consists of three parts:

1. Issues regarding transportation;
2. Goals, objectives and action statements; and,
3. The roadway development standards for the Future Thoroughfare Plan complete the element.

The City's long-term roadway system is shown in the Kerrville Thoroughfare Plan. The Plan will guide the development of rights-of-way, direct the extension of streets, and help to manage the city's future transportation growth.

Issues

The Comprehensive Plan Advisory Committee (CPAC) summarized topics raised by Kerrville residents into the following issues:

1. **Current Transportation Improvement Projects.**
There are several projects that are programmed for construction within the next three years.
2. **Future Transportation Improvement Projects.**
The Transportation Committee has developed priorities for new or improved roads to help meet our future growth.
3. **Road Classification.** Streets are grouped into functional classes according to the type of service they provide for traffic movement and property access. The classification system is important to efficiently move traffic from neighborhoods to employment and shopping areas in the region.

Benefits of Thoroughfare Planning include:

1. *Preserving adequate rights-of-way for future improvements.*
 2. *Minimizing the amount of land required for street purposes.*
 3. *Identifying the functional role that each street serves in the transportation system.*
 4. *Providing thoroughfare information needs for capital improvement priorities.*
 5. *Minimizing the negative impacts of street widening and construction.*
 6. *Incorporating thoroughfare needs in the comprehensive planning process.*
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Functional classes mean the classification of streets by their importance to the issues of traffic movement and access.



4. **Bicycle and Pedestrian System.** Bicycle and pedestrian facilities are important components of the transportation system. Coordinating these improvements is an important consideration of thoroughfare planning.
5. **Airport Plan.** One component of the community's economic development program is the ongoing development of the Kerrville Airport. It is an important complement to the local and regional ground transportation system.
6. **Public Transportation.** Because of the ongoing growth of the population, the availability of a public transportation service is a significant consideration.
7. **Education and Law Enforcement.** Public education will contribute to the implementation of the programmed transportation improvements. The ongoing enforcement of traffic laws will also improve traffic movement.

Goals, Objectives and Action Statements

Goals, objectives, policies and action statements for the Transportation element reflect the identified issues. The following represent a summary of the goals for the Transportation element:

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| Goal 4.1: | Improve citywide transportation mobility through key thoroughfare system improvements. |
| Goal 4.2: | Identify long-term transportation improvements. |
| Goal 4.3: | Create standards and classifications for roads and intersections, and relieve traffic congestion. |
| Goal 4.4: | Promote and enhance pedestrian and bicycle routes. |
| Goal 4.5: | Provide for and enhance the long-term development of the Louis Schreiner Municipal Airport as a viable transportation and economic resource. |
| Goal 4.6: | Develop a public transportation program to provide reliable, convenient and affordable service to persons traveling within Kerrville. |
| Goal 4.7: | Educate the public regarding future thoroughfare planning and its importance to quality of life and continued economic development. |



The following section defines the City's transportation goals, objectives, policies and action statements related to the issues. Future transportation decisions should be made on one or more of the community's transportation goals or objectives.

GOAL 4.1: Improve citywide transportation mobility through key thoroughfare system improvements.

Objective A: Establish a committee to coordinate with the Texas Department of Transportation (TxDOT) and Kerr County to implement transportation system improvements.

Policy: *Maintain active involvement with the State transportation department and other agencies to participate in and oversee the improvement of local roadways, using corridor design methods.*

Action 4.1.1 *Coordinate the design and construction of the Holdsworth Drive extension from S.H. 16 to Harper Road. Key planning and design considerations include:*

- a. Intersection of Holdsworth Drive with Paschal Street.
- b. Extension of Francisco Lemos Street to Paschal Street, which will better integrate access with the existing street system and link it to the hike/bike trail system.
- c. Location, design, and construction of the Spur 98/Thompson Drive extension across the Guadalupe River and tying it into F.M. 1338/Goat Creek Road.
- d. Consideration of managing access and providing for bicycle and pedestrian improvements.
- e. Coordination with TxDOT for the design and rehabilitation of S.H. 27/Broadway between East Main Street and Water Street; realignment of "G" Street and construction of the bridge with bicycle/pedestrian crossing improvements; and, design and rehabilitation of S.H. 16/Sidney Baker with corridor design standards.

Corridor Design refers to:

- *Raised Medians*
 - *Controlled access*
 - *Sidewalks*
 - *Bicycle lanes*
 - *Visible street signs with block numbers, and*
 - *Underground utilities*
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- f. Use of corridor design standards and driveway access management.
- g. Coordination with TxDOT and area property owners to realign and construct the F.M. 1341/Golf Street segment.
- h. Extension of “G” Street to Travis Street and provision for pedestrian and bicycle traffic.
- i. Improvement of Guadalupe Street with Collector Street and corridor design standards. Examine realignment to connect to the south side of river.
- j. Rehabilitation of Francisco Lemos Street Bridge with bicycle and pedestrian consideration.
- k. Rehabilitation of FM 783/Harper Road between S.H. 27 and Jackson Road with corridor design standards.

GOAL 4.2: Identify long-term transportation improvements.

Objective A: Establish an ongoing transportation improvement program to improve current traffic conditions and plan for future improvement needs.

Policy: *Provide for ongoing and continuous improvements of the local and area wide transportation system through identifying resources and advance planning.*

Action 4.2.1 *Conduct alignment studies, including topographic surveys and preliminary engineering, to locate and preserve right-of-way for future collector and arterial roadways, including:*

- Connecting Wren Road to I.H. 10, or improve Goat Creek Parkway to I.H. 10
- Improving F.M. 783/Harper Road from Highway 27 north to I.H. 10
- Extending Spur 100 to I.H. 10
- Extending Loop 534 or Spur 100 to a southerly point along S.H. 16
- Improving F.M. 1341/Cypress Creek Road east of Loop 534 and connecting to Spur 100



Action 4.2.2 *Evaluate transportation system management (TSM) improvements along roadway segments with a level-of-service (LOS) of "D" or below. Improvements may include:*

- Driveway consolidation;
 - Cross access;
 - Minor street closure;
 - Traffic signal warrants and timing;
 - Geometric design alternations;
 - Acceleration/deceleration lanes; and,
 - Restricted left turns.
- a. Conduct traffic engineering studies along roadway segments and at key intersections where there is observed congestion due to traffic impedance and where there is a high incidence of accidents.
 - b. Develop a comprehensive list of capital street improvement projects for input to a formalized capital improvement program (CIP).
 - c. Implement access management standards to better manage the number of driveways and their location and spacing; street intersections and connections; medians and median openings; marginal access roads; traffic signal location and timing; turn lanes and acceleration/deceleration lanes; and, pedestrian and bicycle facilities. Key roadways include Sidney Baker Street, Junction Highway, Loop 534, Holdsworth Drive, Harper Road, Goat Creek Road and other principal and secondary thoroughfares.
 - d. Adopt a driveway ordinance to include guidelines regarding the design, construction, location, width, spacing, radius, offset and coordination of driveways on principal and secondary arterials and collector roadways.
 - e. Acquire additional public street rights-of-way on existing thoroughfares, where available, to construct turn lanes and acceleration/deceleration lanes and to provide additional traffic capacity at intersections.

Levels of Service (LOS)
standards measure
efficiency of traffic flow:

LOS A = Free flowing
traffic at high speeds

LOS B = Stable flow with
speeds beginning to be
affected by higher volume
of traffic

LOS C = Stable flow with
speed and maneuverability
affected by higher volumes
of traffic

LOS D-F = Unstable traffic
flow with low speeds and
frequent stoppages
because of higher traffic
volumes

Traffic impedance results
from excessive turning
movements with multiple
driveways along an arterial
roadway.



Objective B: Provide for long-term transportation improvements within Kerr County outside of the City's ETJ.

Policy: *Protect the long-term planning interests inside the City limits plus the two-mile planning area outside of the city limits, through public coordination efforts and proactive means to preserve thoroughfare rights-of-way and ensure adequate capacity and quality standards.*

Action 4.2.3 *Form a city, county, and TxDOT coordination board to plan traffic improvements.*

- a. Acquire or condemn rights-of-way for segments of the thoroughfare plan that are outside of the City's ETJ.
- b. Consider strategic annexation to extend the City's jurisdiction to encompass growth areas and critical transportation facilities, which require right-of-way preservation that can be applied within the incorporated area.
- c. Coordinate with landowners and developers through annexation agreements to provide for thoroughfare system development in conformance with the Thoroughfare Plan and the City's development standards, including the construction standards of private streets.

Objective C: Require transportation projects to include landscaping, tree preservation and protection of green space within the right-of-way, consistent with traffic safety and design standards.

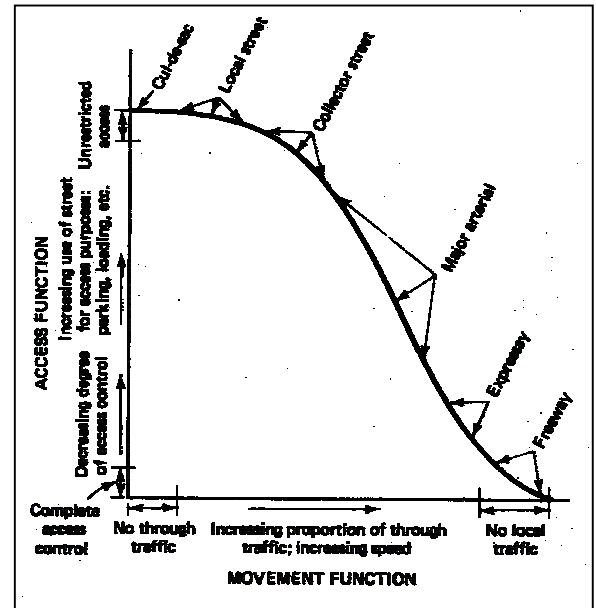
Policy: *Preserve the natural beauty through the environmental design of roadways and other transportation improvements.*

Action 4.2.4 *Use urban design standards in designing and extending roads.*

- a. Coordinate with TxDOT and Kerr County to ensure that the design of bridges, overpasses, retaining walls and other improvements include consideration of the visual impact and utilize design features and materials, including landscaping treatments, that will enhance the aesthetic appearance of the structures.



- b. Acquire rights-of-way for thoroughfares to include additional open space areas and buffer zones, particularly for new high visibility corridors such as Loop 534.
- c. Establish standards and requirements for tree preservation in roadway improvement planning and tree protection during construction.
- d. Regulate development and require high standards for landscaping and property maintenance along highways and major thoroughfares to maintain aesthetics and avoid a “strip development” pattern of use.
- e. Narrow the pavement width of collector streets from 40 to 36 feet and utilize the extra four feet of right-of-way for sidewalks and trails, neighborhood-scale streetlights, tree preservation, landscaping and/or public open space.



GOAL 4.3: Create standards and classifications for roads and intersections, and relieve traffic congestion.

Objective A: Adopt a local street classification system to determine types of service relating to traffic movement and land access.

Policy: Use the street classification system to acquire the necessary rights-of-way to meet the functional service needs of each thoroughfare.

Action 4.3.1 Create standards to distinguish different types of roads.

- a. Expand the current classification system to delineate the functional and design characteristics of principal and secondary arterial streets.
- b. Adopt standards for rights-of-way and typical street cross sections for each functionally classified



roadway including bike lanes, sidewalks and handicap access.

- c. Incorporate thoroughfare development standards into the City's subdivision regulations pertaining to location and alignment of thoroughfares, right-of-way and pavement width, continuation and projection of streets, location and angles of intersections, lengths of cul-de-sacs and geometric design standards.
- d. Develop "typical" cross sectional diagrams for each classified street to detail the design and placement of sidewalks and trails, amount of open space, use of medians, and street-side improvements such as future transit pull-out bays, stops, etc.

Objective B: Use the Thoroughfare Plan to ensure efficient and desirable connections between major arterials, other thoroughfares and to aid in prioritizing transportation improvement needs.

Policy: *Use the Thoroughfare Plan to guide the orderly development and incremental expansion of the City's transportation system.*

Action 4.3.2 *Ensure compatibility of transportation improvements with City Plans.*

- a. Recognize where future transportation improvements are needed and incorporate thoroughfare planning into private development and public improvement programs to ensure adequate coordination and consideration.
- b. On an annual or bi-annual basis, have a joint committee evaluate the Transportation element and the Thoroughfare Plan to identify necessary adjustments and periodically consider and implement plan amendments.
- c. Evaluate the compatibility of the City's Unified Development Code and development standards with the Thoroughfare Plan, particularly with respect to right-of-way width, and alignment of thoroughfares and driveways on collector roadways.



Objective C: Through the development review process, ensure adequate provision of collector and arterial thoroughfares while preserving mobility and ensuring traffic safety.

Policy: *Coordinate private land development decisions with the Thoroughfare Plan and the thoroughfare development plan to provide adequate access and circulation both on- and off-site.*

Action 4.3.3. *Use the Thoroughfare Plan and traffic impact analysis for development projects.*

- a. Utilize the Thoroughfare Plan during the subdivision and site development review process to ensure provision of continuous collector roadways between adjacent developments and local residential streets between subdivisions.
- b. Dedication of public right-of-way and construction of street improvements should be required as development occurs, in accordance with thoroughfare requirements shown on the adopted Thoroughfare Plan.
- c. Consider traffic impacts on affected transportation facilities during review of zone changes and subdivision applications, with developer participation in improvements needed to maintain an adequate level of service.
- d. Require traffic impact studies and mitigation actions for development proposals requesting access to:
 - State Highway 16/Sidney Baker/Medina Highways;
 - State Highway 27/Junction Highway/Main Highway;
 - Loop 534/Memorial Drive;
 - F.M. 783/Harper Highway;
 - S.H. 173/Bandera Highway;
 - FM 1338/Goat Creek Parkway;
 - Spur 100/Veteran's Parkway;
 - Spur 98/Thompson Drive; and,
 - F.M.1341/Golf Street and Cypress Creek Road.



Objective D: Provide access between developments, ensure citywide mobility, and minimize response time for emergency vehicles.

Policy: *Acquire future rights-of-way, through dedication or other means, for the extension of collector and arterial roadways shown on the Thoroughfare Plan.*

Action 4.3.4 *Provide road connections between developed and undeveloped areas.*

- a. Recognize opportunities for extending collector and arterial roadways between existing neighborhoods and across the tributaries of the Guadalupe River.
- b. Use Harper Road for recreation vehicle (RV) and commercial vehicle traffic.
- c. Prepare an acquisition program to acquire rights-of-way in the land use growth areas to ensure adequate and cost effective thoroughfare improvement in advance of ensuing development.
- d. Identify opportunities for acquiring undeveloped lots or other parcels to extend collector roadways within developing areas to provide for adequate connections between developments.
- e. Identify the impact on dead-end streets on the flow of traffic within and between neighborhoods. Determine feasible and appropriate courses of action, such as right-of-way or easement acquisition, condemnation, and other means to remedy dead-end streets.
- f. Require the construction of dead-end streets or cul-de-sacs to be extended to the farthest property line to ensure planned extensions.
- g. Establish hazardous materials routes around the city to minimize risks to the citizens and the river.

Dead-end streets
refer to collector or residential streets that offer no opportunity for future connection to adjacent development.

Objective E: Use control devices to maximize an efficient traffic flow throughout the community.

Policy: *Evaluate the appropriate placement and use of traffic control devices to provide for efficient traffic operation, lessen congestion and improve traffic safety.*



Action 4.3.5 *Establish a program to maintain and improve traffic control signs and signals.*

- a. Establish criteria for the placement of traffic control devices in conformance with the Texas Manual of Uniform Traffic Control Devices (MUTCD).
- b. Conduct annual signal warrant studies at high volume intersections to validate traffic control improvements and to invalidate current signals that may no longer be warranted due to changing traffic patterns or thoroughfare improvements.
- c. Coordinate with TxDOT to develop a Traffic Control Device Preventative Maintenance Program, consisting of periodically inspecting and maintaining traffic signals, signs and pavement markings to improve effectiveness and safety.

*The **MUTCD** contains standards for traffic control devices that regulate, warn and guide users along a roadway.*

GOAL 4.4: Promote and enhance pedestrian and bicycle routes.

Objective A: Pursue development of a bicycle and trail network throughout the community with links between neighborhoods, schools, parks, the Guadalupe River and other tourism destinations.

Policy: *Encourage development of pedestrian and bicycle facilities recognizing their tourism value and the environmental significance of alternative transportation modes.*

Action 4.4.1 *Create standards for pedestrian and bicycle use in new developments.*

- a. Utilize the bicycle and pedestrian master plan to construct on- and off-street trails and pedestrian walkways connecting neighborhoods, schools, parks, shopping and employment centers.
- b. Establish an ongoing pedestrian and bicycle system planning program to acquire easements and rights-of-way, through fee simple purchase or dedication, in conjunction with or preferably in advance of development.
- c. Acquire conservation easements within the flood plain and along Dietert Creek, Town Creek, Quinlan



The Transportation Equity Act for the 21st Century was enacted in 1998. It authorizes the Federal surface transportation program for highways, highway safety, and transit for the six-year period 1998-2003. The Act affirms the following priorities:

- Improving safety;
 - Protecting the public health and the environment; and,
 - Creating opportunity for all Americans.
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Creek, Third Creek, Meeting Creek and the Guadalupe River as greenbelt corridors.

- d. Seek Federal and State financial assistance grants for pedestrian and bicycle transportation projects, such as transportation enhancement funds under the Transportation Equity Act for the 21st Century (TEA-21).
- e. Construct the proposed bicycle and pedestrian trail network in an incremental yet deliberate manner.

Objective B: Provide an effective way to prioritize sidewalk improvement areas by type of street and adjacent land use.

Policy: *Invest in pedestrian facilities to provide a safe means for residents and visitors to walk to parks, schools and other community destinations.*

Action 4.4.2 *Create a program to monitor and improve existing sidewalks.*

- a. Conduct a comprehensive and detailed inventory of sidewalks and other pedestrian facilities throughout the community and prioritize needed improvements by use and proximity to public facilities.
- b. Notify property owners of their responsibility to repair and replace unsafe sidewalks on their property.
- c. Construct pedestrian walkways, sidewalks, crosswalks, handicap accessible ramps and curb cuts complying with the state regulations pertaining to the disabilities act, in areas with significant pedestrian traffic, such as the Central City, along major transportation arteries such as Sidney Baker and Junction Highway/Main Street, around elementary and middle schools, public parks, public buildings such as the Kerr County Courthouse and other activity areas.
- d. Use traffic calming improvements to reduce speeds and discourage cut-through traffic in residential neighborhoods.
- e. Design and install traffic signal systems to accommodate pedestrians and bicyclists through



pedestrian/bicycle-actuated sensors and appropriate signal timing.

GOAL 4.5: Provide for and enhance the long-term development of the Louis Schreiner Municipal Airport as a viable transportation and economic resource.

Objective A: Facilitate aviation-related business use of the airport by providing additional vehicle access, aircraft taxiways, and adequate infrastructure.

Policy: *Earmark funds for the long-term development of the airport recognizing its local value as a transportation mode for business and trade activity.*

Action 4.5.1 *Create airport compatibility standards in the Zoning Ordinance for the municipal airport.*

- a. Airport improvements identified in the recently updated Airport Master Plan should be implemented to expand and improve airport facilities, operations and services.
- b. Periodically update the Airport Master Plan to reflect the changing conditions and needs of the airport.
- c. Improve transportation routes (such as an extension of Spur 100 to I-10) to/from the airport recognizing its value for airport related industrial and business development.

GOAL 4.6: Develop a public transportation program to provide reliable, convenient and affordable service to persons traveling within Kerrville.

Objective A: Determine the need for the development of a local public transportation system.

Policy: *Seek a viable public transportation system.*

Action 4.6.1 *Review the possibility of creating a public transportation system.*

- a. Establish a taskforce to study the feasibility of a public transportation provider.



Park and ride areas contain free, convenient parking lots where commuters meet for carpools or commuter services.

- b. Establish a taskforce representing TxDOT, Kerr County, the City, Peterson Regional Healthcare Center, Dietert Center, U.S. Veterans Administration Hospital, Kerrville State Hospital, Schreiner University, hotels, restaurants, local retirement centers, and recreational vehicle parks to study:

- service options
- funding sources
- operational issues, and
- cost efficiency.

Objective B: Develop a park-and-ride program to provide ridesharing opportunities to/from San Antonio and other regional employment destinations.

Policy: *Support a park-and-ride program.*

Action 4.6.2 *Identify an appropriate location for future development of a park-and-ride lot with convenient access to I-10.*

GOAL 4.7: Educate the public regarding future thoroughfare planning and its importance to quality of life and continued economic development.

Objective A: Obligate adequate resources to manage an education outreach program targeting citizens and businesses.

Policy: *Establish a program to periodically publish articles and news releases about upcoming improvement projects and amendments to the local transportation plan.*

Action 4.7.1 *Establish standards and protocol for communicating with the media and neighborhood organizations concerning thoroughfare planning.*

- a. Educate developers and landowners so that private land use decisions can anticipate which streets will become major traffic facilities in the future.
- b. Enforce traffic laws, particularly in pedestrian sensitive areas, such as around schools and parks and along neighborhood streets.
- c. Conduct speed studies on street with high incidence of speeding to identify appropriate limits.



- d. Display speed detection equipment in key locations as a speed control device.
- e. Replace worn signs and post new traffic signs along roadways in conformance with uniform traffic control standards.

Thoroughfare Plan

Kerrville's existing and proposed thoroughfare system is displayed in **Figure 4.1, Thoroughfare Plan**. The objective of the Kerrville Thoroughfare Plan is to show the approximate alignments for planned rights-of-way to allow for the orderly expansion of the transportation system. Decisions regarding the planning and programming of future streets and roads through the review of subdivision plats will be compared to the Thoroughfare Plan.

The alignments of planned extensions and new roadways will vary depending on the design and layout of development. Strategic annexation and coordination with Kerr County will ensure the provision of adequate transportation facilities concurrent with development. Road improvements also appear in the area outside of the current ETJ, which will become part of the City's planning area upon reaching a population of 25,000 persons.

The Thoroughfare Plan represents a thoroughfare system without a commitment to a time frame. Implementation of thoroughfare system improvement will occur in stages as the City grows. Private developers, the City of Kerrville, Kerr County, or TxDOT, may construct individual street improvements. The Plan recommends continuous collector and arterial roadways as well as residential street connections between developments to provide adequate circulation of vehicles, bicyclists and pedestrians. The Thoroughfare Plan will assist landowners in subdivision planning, dedication of public rights-of-way, and provision of setbacks for new buildings, utility lines, and other improvements located along the rights-of-way for existing or planned thoroughfares.

Street Classification

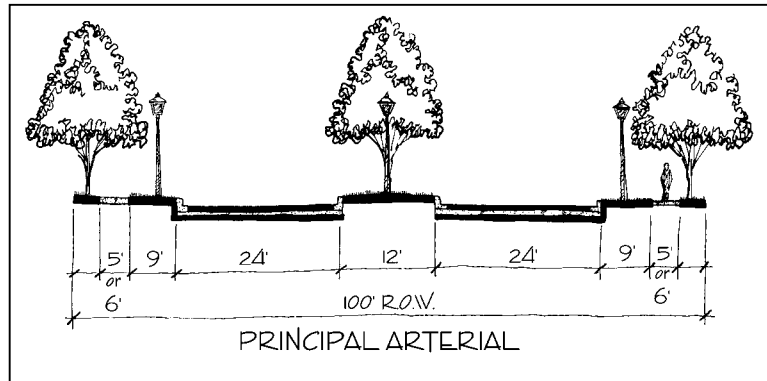
Streets are grouped into functional classes according to their purpose of moving traffic or providing access to development. The Thoroughfare Plan references the functional class of streets as follows:

- Principal Arterial
- Secondary Arterial
- Collectors
- Local Residential Streets



This classification system varies from the current system by adding secondary arterials as a new cross section. Classifications for alleys and access streets, which are part of the current classification system, are a function of service and property access and, therefore, are not a functional element of the citywide thoroughfare system. They should remain within the City's standards though, to ensure adequate property access.

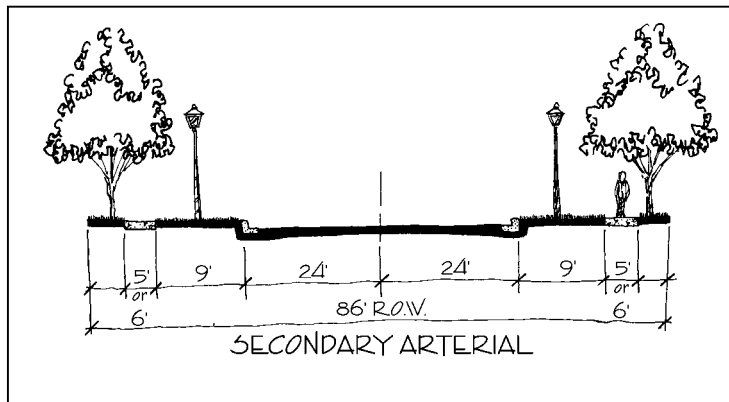
Principal Arterial. A principal arterial roadway may be a divided or undivided thoroughfare with a minimum 100 feet of total street right-of-way. A divided roadway may have a 48-foot pavement section with a 12-foot raised median. Where there are constrained conditions, an undivided roadway may have 48 to 60 feet of pavement width with a center turn lane at intersections.



Sidewalks are located on both sides and are located nine feet from the back of the curb. A 12-foot median/esplanade provides for access control and is sufficient for decorative street lighting, landscaping and green space.

Examples of principal arterials include Sidney Baker Street, Harper Road, Loop 534, Junction Highway, Main Street, Memorial Boulevard and F.M. 1338/Goat Creek Road.

Secondary Arterial. A secondary arterial roadway is an undivided thoroughfare with a minimum recommended 86 feet of total street right-of-way with a 48-foot pavement section. Sidewalks are located on both sides of the street and are located nine feet from the back of curb. The 28 feet of right-of-way, excluding the width of pavement, provides ample space for decorative street lighting, landscaping, and public green space.

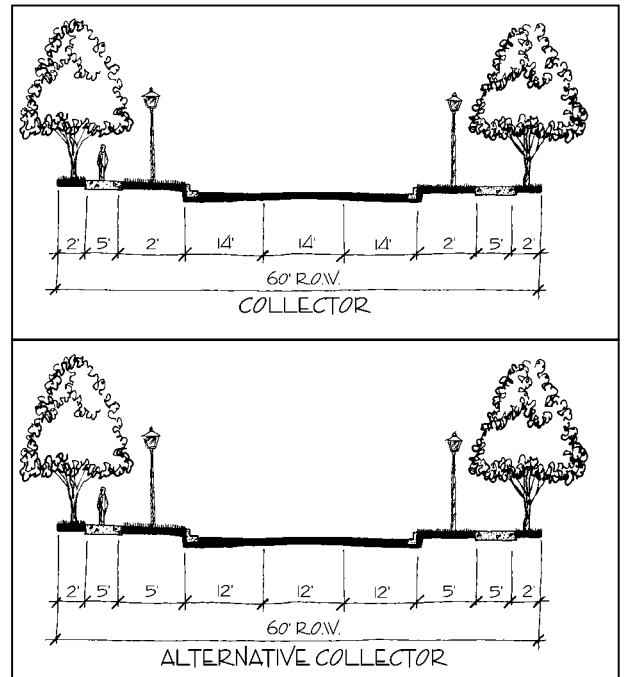


Examples of secondary arterials include F.M. 394, Thompson Drive, "G" Street, Bandera Highway, Goat Creek Cutoff Road and Sheppard Rees.

Collector. A collector roadway is undivided with a total street right-of-way of 60 feet and a pavement width



of 42 feet. As an alternative, a developer willing to set aside space for added green space or enhanced pedestrian pathways, may request that pavement width be reduced to 36 foot, which will allow reduced development costs, increased green space, increased pedestrian safety, improved ability to locate the street to preserve trees and other natural features, and reduced travel speed resulting from the narrower street. The 36 feet of pavement width is adequate to serve its designed purpose of collecting and distributing traffic to the arterial roadway network, particularly when walking is encouraged and considered in development design. The 24 feet of right-of-way, excluding the width of pavement, provides ample space for neighborhood-scale street lighting, street trees and public green space. There are multiple examples of collector roadways including Schreiner Street, Water Street, Jackson Road, Guadalupe Street and Comanche Trace Drive.



Local Residential. Local residential streets are recommended to have a total street right-of-way of 50 feet and a pavement width of 30 feet. Sidewalks are located either on one or both sides, dependent upon local preference. With a 30-foot street section, the right-of-way is constrained with respect to sidewalk spacing resulting in a 3-foot separation from back of curb. The 30 feet of pavement is more than sufficient to accommodate two travel lanes. The 20 feet of right-of-way, excluding the width of pavement, is sufficient yet constrained for neighborhood-scale street lighting, landscaping, and green space.

An alternative to 30 feet of pavement is a cross-section with a reduced pavement section to 24 feet. This width is sufficient to accommodate two travel lanes and adequate for fire apparatus, but offers the added benefit of neighborhood traffic calming. This approach is one of the defining principals of new urbanism, which is designed to create a pedestrian-scaled neighborhood with reduced streets and building setbacks. A narrower

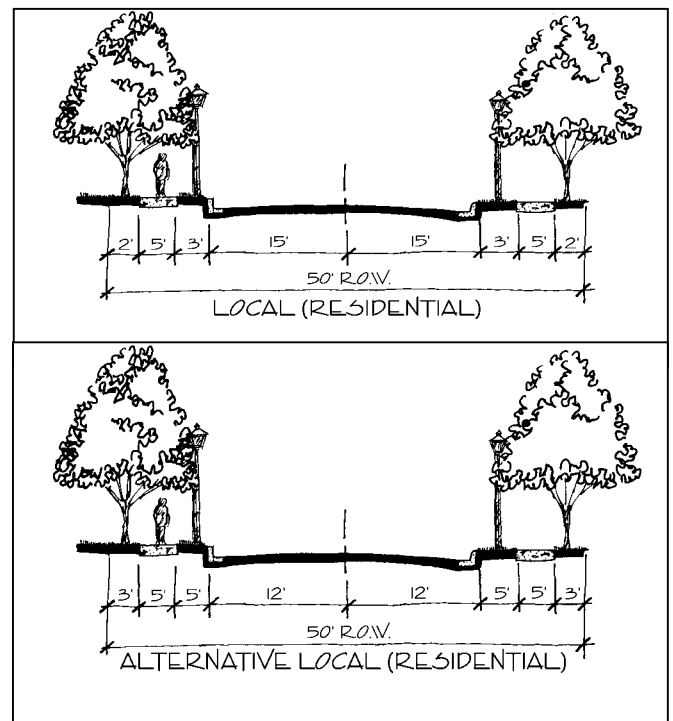
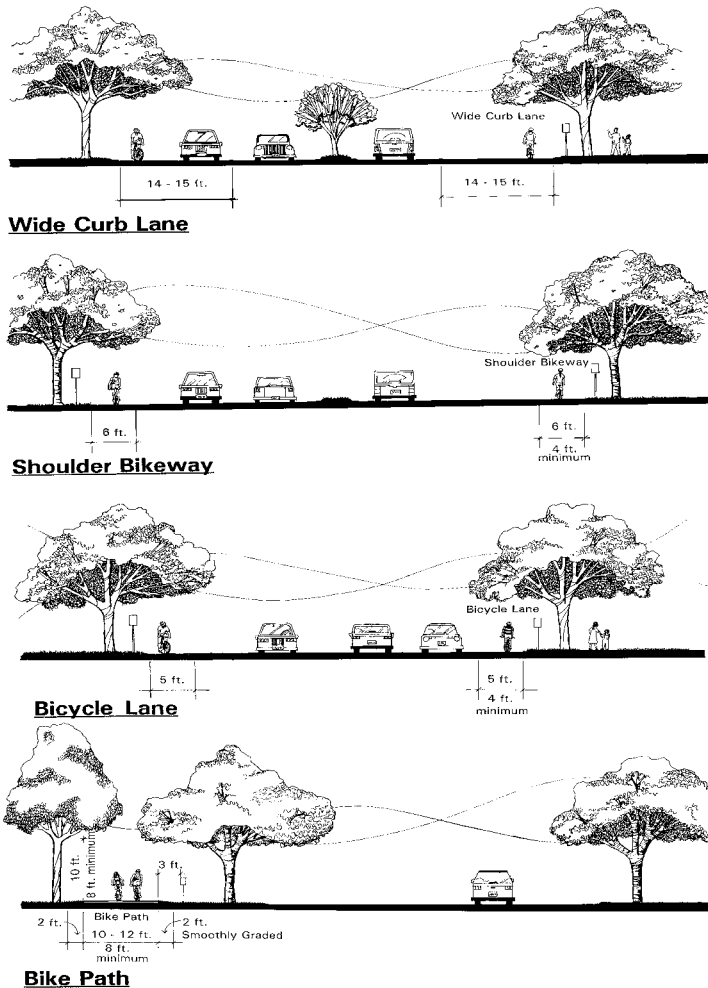




FIGURE 4.2
Typical Bikeway Sections
Kerrville Comprehensive Plan
Kerrville, Texas



Access management is the coordination of driveways and access easements along a major roadway to limit conflicts caused by excessive turning movements.

displayed in **Figure 4.2, Typical Bikeway Sections**. Local and collector streets are suitable for use by most adult bicycle riders while secondary arterial streets are only suitable for limited use by bicyclists due to higher traffic volumes and higher speeds.

Access Management

The practice of access management is to enhance the performance and safety of the major street system. It manages congestion on existing

street width also allows an increase in the distance from the sidewalk to the street.

“Bicycle-Friendly” Roadways

Additional alternatives to the standard thoroughfare include those designed to aggressively promote use of bicycles. A comprehensive, safe and efficient network of “bicycle-friendly” roadways not only emphasizes alternative methods of transportation, but also improves overall quality of life for residents.

Skilled bicyclists usually prefer to travel along the street system and, where possible, should be accommodated through striped bike lanes or extra-wide curb lanes on arterials and collectors. The majority of bicyclists is less skilled and need to be separated from high speed and high volume traffic through the use of off-street bike lanes and paths. Typical design sections for different bikeway classifications are



transportation facilities and protects the capacity of future transportation systems by controlling access from adjacent development. As displayed in **Figure 4.3, Access Management Techniques**, means to accomplish access management include limiting and separating vehicle (and pedestrian) conflict points, reducing locations that require vehicle deceleration, removing vehicle turning movements, creating intersection spacing that facilitate signal progression, and providing on-site ingress and egress capacity.

Access management also focuses on the spacing and design of driveways, street connections, medians and median openings, auxiliary lanes and transit facilities, on-street parking and parking facilities, on-site storage aisles, traffic signals, turn lanes, freeway interchanges, pedestrian and bicycle facilities, bus stops and loading zones.

Traffic Calming

Traffic calming is instrumental in providing livable areas where residents feel safe walking, bicycling and playing. As shown in **Figure 4.4, Neighborhood Traffic Calming Techniques**, it is accomplished through a combination of measures that control both traffic speed and volume. Volume controlled measures include street closures, restrictive one-way streets; turn restrictions, which are effective in reducing traffic on streets. Speed controlled measures are important in reducing injury accident rates and increasing walking or bicycling on streets. Speed control measures should be designed into the community through urban design features such as street trees, center islands, traffic circles, textured pavements, speed humps and flat topped speed tables.

Traffic calming
means the
combination of
physical features that
slow vehicle speed
and improve the
conditions for
pedestrian traffic.

FIGURE 4.3
Access Management Techniques
Kerrville Comprehensive Plan
Kerrville, Texas

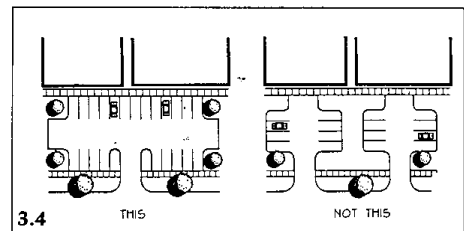
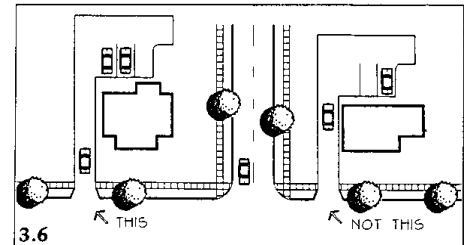
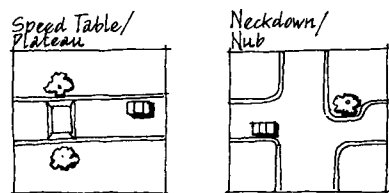
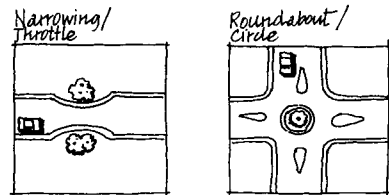
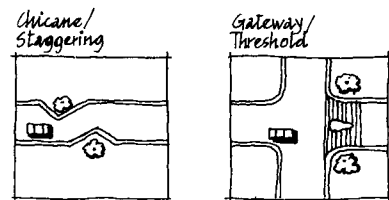


FIGURE 4.4
Neighborhood Traffic Calming
Techniques
Kerrville Comprehensive Plan
Kerrville, Texas



Source: Best Development Practices, Reid Ewing, Planner's Press, Chicago 1996, p. 63